OHEP Operations Reviews

Goals

- Obtain clear understanding of what's required to ensure maximum scientific output
- Give input to outyear planning for overall HEP program in the era of tight resources
- Get validations for efficient operations or recommendations for possible improvement

Proposed Future Plans

- Annual Operations Reviews for Major Facilities: evaluate and validate operations and upgrade plans for accelerator & detector(s)
- Annual Program Reviews for Research: More emphasis on Research Program aspect of the laboratory

U.S. Department of Energy's Office of Science

SUMMARY OF FERMILAB TEVATRON AND SLAC B-FACTORY OPERATIONS REVIEWS

Presented to:

High Energy Physics Advisory Panel

Daniel R. Lehman, Review Chairman
U.S. DOE Office of Science
September 23, 2004

Operations Review Charge

The review **committee should examine** all the FNAL/Tevatron and SLAC/B-Factory **activities associated** with facility **operations supported by the High Energy Physics** program and address the following questions:

1. **Is Laboratory management effectively setting priorities**, tracking progress, resolving problems and communicating with key stakeholders?
2. **Are resources sufficient and appropriately allocated** with a proper mix of skill sets and optimized to meet the stated mission, goals and objectives (bottoms up analysis)?
3. **Are there any** programmatic, technical and infrastructure **risks**?
4. **Is there an ongoing program of self-assessment** aimed at continuously improving maintenance and operations?
5. **Is ES&H** planning and implementation **receiving appropriate attention?**

Operations Review Process

- SC Office of **High Energy Physics developed review charge and unique data needs** in consultation with the laboratories.
- Review **subcommittee leads** were encouraged to **work** with designated laboratory counterparts **well in advance of the actual review**
- Efforts made to **maintain same review committee** for both reviews.
- Review subcommittees conducted an **unusually large number of interviews** with a significant cross-section of laboratory personnel.

Fermilab Tevatron Operations Review Committee (March 16-18, 2004)

SC1
Accelerator

* Rod Gerig, ANL
Ewan Paterson, SLAC
Kem Robinson, LBNL

SC2
Research

* Jim Siegrist, LBNL
Howard Gordon, BNL
Roy Whitney, TJNAF

SC3
Business and Finance

* Mike Derbidge, ANL
Don Boyd, PNNL
Mary Erwin, TJNAF

SC4
Infrastructure and ES&H

* Dave McGraw, LBNL
Mike Bebon, BNL
Dave Goodwin, DOE/SC
John Yates, DOE/SC

SC5
Management

* Marty Breidenbach, SLAC
Klaus Berkner, consultant
Howard Gordon, BNL
Steve Meador, DOE/SC

Observers

Aesook Byon, DOE/SC
Michael Procario, DOE/SC
Ronald Lutha, DOE/FAO
Jane Monhart, DOE/FAO

LEGEND

SC Subcommittee
* Chairperson
[ ] Part-time Subcommittee Member
Count: 18
(excluding observers)

SLAC B-Factory Operations Review Committee (June 15-17, 2004)

SC1
Accelerator

* Rod Gerig, ANL
Roger Dixon, FNAL
Kem Robinson, LBNL

SC2
Research

* Jim Siegrist, LBNL
Howard Gordon, BNL
Roy Whitney, TJNAF

SC3
Business and Finance

* Don Boyd, PNNL
Mike Bartos, ANL
Bruce Chrisman, Fermilab

SC4
Infrastructure and ES&H

* Dave McGraw, LBNL
Mike Bebon, BNL
Marty Fallier, BNL
Carole Fried, LBNL
John Yates, DOE/SC

SC5
Management

* Jay Marx, LBNL
Klaus Berkner, consultant
Jeff Hoy, DOE/SC
Steve Meador, DOE/SC

Observers

Aesook Byon, DOE/SC
Glen Crawford, DOE/SC
John Muhlestein, DOE/SSO

LEGEND

	Subcommittee
SC	Chairperson
*	Part-time Subcommittee Member
[ ]	**Count: 18** (excluding observers)

Charge Item # 1

Is Laboratory management effectively setting priorities, tracking progress, resolving problems and communicating with key stakeholders?

- Both labs effectively set priorities
- Recent success with their highest priority projects (Tevatron Run II at Fermilab; B-Factory at SLAC) reflect capabilities to track progress, resolve problems and communicate with key stakeholders

Charge Item # 2

Are resources sufficient and appropriately allocated with a proper mix of skill sets and optimized to meet the stated mission, goals and objectives?

- Highly dedicated staff at both labs have made heroic efforts leading to success in high priority projects
- Fermilab's ability to support proposed upcoming major project transitions is a concern
- Sustaining the staff's current heroic level of effort at SLAC for the long term is a concern
- Future workforce issues at both labs include concerns with skill mix and an aging demographic

Charge Item # 3

Are there any programmatic, technical and infrastructure **risks**?

- Both labs have significant technical and programmatic challenges (performance of upgrades, critical engineering skills, computing challenges, etc.)
- Business Service Divisions at both labs have limited depth in key positions
- Significant infrastructure issues create risk for ongoing operations
  - Fermilab – power distribution facilities
  - SLAC – recapitalization of facilities and utility systems

Charge Item # 4

Is there an ongoing program of self-assessment aimed at continuously improving maintenance and operations?

- Both labs use external and internal reviews to evaluate performance
- Neither lab has a formal benchmarking program

Charge Item # 5

Is ES&H planning and implementation **receiving appropriate attention?**

- ES&H at both labs have the attention and involvement of senior management
- ES&H planning and implementation is visible and flows from the top to the bottom of each organization

Summary of Key Recommendations Common to both Laboratories

- Using a bottoms-up approach, extend current manpower analyses through FY09 to determine required staffing levels and skill mix
- Develop plans for infrastructure renewal
- Institute a formal benchmarking program with other laboratories to assess the efficiency of lab operations

Final Observations

- Both labs commended for recent successes with large, high profile projects
- Lower priority activities have been cancelled or modified dramatically (e.g., detector upgrades at Fermilab; End Station A program at SLAC)
- Significant infrastructure issues present challenges to ongoing operations
- Staff is performing heroically, but this may not be sustainable; business operations staff is thin and stressed
- Laboratory Operations Reviews offer a **snapshot**; they are not a validation of lab priorities, stated capabilities or out year resource plans